1648#3

COPY OF PAPERS ORIGINALLY FILED

DOCKET NO.: UPN-4099/ G-1154

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICIRECEIVED

JUL 1 1 2002

TECH CENTER 1600/2900

In Re Application of:

David B. Weiner, et al.

Serial No.: 09/935,100

Filing Date: August 22, 2001

.....

For: VPR FUNCTION AND ACTIVITY

Group Art Unit: 1648

Examiner: Not Yet Assigned

DATE OF DEPOSIT: JUNE OF COOL

I HEREBY CERTIFY THAT THIS PAPER IS BEING
DEPOSITED WITH THE UNITED STATES POSTAL
SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID ON
THE DATE INDICATED ABOVE AND IS ADDRESSED TO
THE ASSISTANT COMMISSIONER FOR PATENTS,
WASHINGTON DC 20231

TYPED NAME: Gwilym John Owen Attwell
RECISTRATION NO.: 45,449

Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

 \boxtimes

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. §1.56(b).

In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first office action after the filing of request for continued examination under §1.114, no additional fee is required.

	In acc	ordance with §1.129(a), this Information Disclosure Statement is being		
	filed in connection with \square the first or \square second After Final Submission,			
	therefore:			
		Certification in Accordance with §1.97(e) is attached; or		
		The fee of \$180.00 as set forth in \$1.17(p) is attached.		
	In accordance with §1.97(c), this Information Disclosure Statement is being filed			
	after the period set forth in §1.97(b) above but before the mailing date of either			
	a Final Action under §1.113 or a Notice of Allowance under §1.311, or before an			
	action that otherwise closes prosecution in the application, therefore:			
		☐ Certification in Accordance with §1.97(e) is attached; or		
		☐ The fee of \$180.00 as set forth in §1.17(p) is attached.		
	In acco	ordance with §1.97(d), this Information Disclosure Statement is being filed		
	after t	he mailing date of either a Final Action under §1.113 or a Notice of		
	Allow	ance under §1.311 but before, or simultaneously with, the payment of the		
	Issue l	Fee, therefore included are: Certification in Accordance with §1.97(e); and		
	the su	bmission fee of §180.00 as set forth in §1.17(p).		
	Copie	s of each of the references listed on the attached Form PTO-1449 are		
	enclos	sed herewith.		
Ø	Copie	s of references listed on the attached Form PTO-1449 are enclosed herewith		
	EXCEPT THAT:			
	\boxtimes	In view of the voluminous nature of references 45 and 47, and the		
		likelihood that these references are available to the Examiner, copies are		

DOCKET NO.: UPN-4099/ G-1154

PATENT

- In accordance with §1.98(d), copies of the following references listed on the attached Form PTO-1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C.§120 have been made in the instant application:
- Copies of references 1-61 listed on the attached Form PTO-1449 were previously cited by or submitted to the Patent and Trademark Office in prior application Serial No. 08/167,608, filed December 15, 1993.
 - ☐ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

There are no listed references which are not in the English language.

Date: June 27, 2002

Gwilym John Owen Attwell Registration No. 45,449

WOODCOCK WASHBURN LLP One Liberty Place - 46th Floor Philadelphia, PA 19103 Telephone: (215) 568-3100

Facsimile: (215) 568-3439

C 2001 WW



 $\frac{1}{2}$

100

 \mathcal{N}_{i}^{s}



JUL 1 1 2002

TECH CENTER 1600/2900

Sheet 1 of 7

Form	PTO-1449 Modified OIPE	Docket No. UPN-4099/G-1154	Serial No. 09/935,100
List o	of Patent and Publications Cited by Applicant everal sheets if necessary (Applicant PADEMARY)	Applicant David B. Weiner, et	al.
U.S. 1	Department of Commerce nt and Trademark Office	Filing Date August 22, 2001	Group Not Yet Assigned
ОТН	ER DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)
1	Adachi, et al., "Production of acquire retrovirus in human and nonhuman clone", <i>J of Virology</i> , 1986 , 59, 284-2	ells transfected with ar	-
2	Aguanno, et al., "12-O-Tetradecanoylphorbol-13-Acetate-induced differentation of a human rhabdomyosarcoma cell line" <i>Cancer Research</i> , 50:3377-3382		
3	Arya, et al., "Trans-activator gene of human t-lymphotropic virus type III (HTLV-III)", Science, 1985, 229, 69-73		
4	Chantal Petit, et al., "Human immunodeficiency virus infection down regulates HLA class II expression and induces differentation in promonocytic U937 cells", <i>J. Clin. Invest.</i> , 1987 , 79:1883-1889		
5	Cohen, et al., "Identification of HIV-1 vpr product and function", J. Acquir. Immune Defic. Syndr., 1990, 3, 11-18		
6	Cohen, et al., "Human immunodeficiency virus vpr product is a virion-associated regulatory protein," J. Virol., 1990, 64, 3097-3099		
7	Colmenares, et al., Cell, 1989		
8	Dedera, et al., "Viral protein R of human immunodeficiency virus types 1 and 2 is dispensable for replication and cytopathogenicity in lymphoid cells," <i>J. of Virol.</i> , 1989 , 63, 3205-3208		
9	Fisher, et al., "A molecular clone of HTLV-III with biological activity," Nature, 1985, 316,262-265		
10	Gallo, et al., "Frequent detection and isolation of cytopathic retroviruses(HTLV-III) from patients with aids and at risk for aids," Science, 1984, 224, 500-503		
EXAMINER		DATE CONSIDER	ED



JUL 1 1 2002

		302	_
		- TITE!	1600 2900 Sheet 2 of 7
Form	PTO-1449 Modified	Docket No.H CENTLE UPN-4099/G-1154	1600/2900 Sheet 2 of 7 Serial No. 09/935,100
List of ((Use se	/ %	Applicant David B. Weiner, et	al.
U.S. D	Department of Commerce It and Trademark Office	Filing Date August 22, 2001	Group Not Yet Assigned
ОТНЕ	R DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)
11	Garrett, et al., "Rev activates expression of the human immunodeficiency virus type vif and vpr gene products," J. of Virology, 65,1653-1657		
12	Gras-Masse, et al., "A synthetic protein corresponding to the entire vpr gene product from the human immunodeficiency virsu HIV-1 is recognized by antibodies from HIV-infected patients," Int. J. Peptide Protin Res., 1990, 36, 219-226 Griffin, et al., "Activation of HIV gene expression during monocyte differentation by induction of NF-KB," Nature, 1989, 339, 70-73 Harada, et al., "Tumor promoter, TPA, Enhances replication of HTLV-III/LAV," Virology, 1986, 154, 249-258		
13			
14			
15	Hattori, et al., "The human immunod productive infection of human macro 8080-8084		
16	Hiti, et al., Mol. Cell. Biol., 1989, 9,	4722-4730	
17			
18	A. Voller, et al., <i>Immunoassays for the 80's.</i> , University Park, 1981 Levy, et al., "Isolation of lymphocytopathic retroviruses from San Francisco patients with AIDS," <i>Science</i> , 1984 , 225, 840-842		
19			
20	Levy, D.N., et al., "Induction of cell differentiation by HIV-1 VPR," Aids Res. Human Retroviruses, 1994, 10(S1), S92, No. XP 002031073 (Abstract only)		
21	Levy, et al., "Induction of cell differed vpr," Cell, 1993, 72, 541-550	entation by human imn	nunodeficiency virus 1
EXAMINER		DATE CONSIDER	ED

^{*} A copy of these references will not be forwarded to the U.S. Patent and Trademark Office since they are believed to be too voluminous and easily obtainable by the Examiner.



JUL 1 1 2002

			1600 300 t 3 of 7
Form	PTO-1449 Modified	Docket No. TECH C UPN-4099/G-1154	NTER 1600 2000 t 3 of 7 Serial No. 09/935,100
	f Patent and Publications	Applicant David B. Weiner, et	al.
U.S. I Pater	Department of Commerce TRADEMANN Of and Trademark Office	Filing Date August 22, 2001	Group Not Yet Assigned
ОТН	ER DOCUMENTS (Including Autho	r, Title, Date, Pertine	nt Pages, Etc.)
22	 Li, et al., "Human immunodeficiency virus type 1 DNA synthesis, integration and efficient viral replication in growth-arrested T cells," J. Virol. 1993, 67, 3969-3977 Ling, et al., PCR Meth Appl., 1991, 1, 63-69 Morgenstern, et al., Nucl. Acids. Res., 1990, 18, 3587-3596 		
23			
24			
25 Myers, et al., Aids Res. Hum. Retrovir., 1992, 8, 373			
Ogawa, et al., "mutational analysis of the human immunodeficiency virus reading frame," J. Virol. 1989, 63, 4110-4114		eficiency virus vpr open	
27	 27 Ratner, et al., Science, 1985, 313, 277-284 28 Ratner, et al., AIDS Res. Hum. Retroviruses, 1987, 3, 57-69 		
28			
29	Reiss, et al., "antibody response to viral proteins U (vpu) and R (vpr) in HIV-1 infected individuals," J. Acquired Immune Deficiency Syndromes, 1990, 3, 115-122		
30	Reiz, et al., AIDS Res. Human Retro., 1992, 8, 1549		
31	Rich et al., "Increased susceptibility productive infection with human imr 1992, 89, 176-183		
XAMINER		DATE CONSIDER	ED

, i

ŝ

¥

. A

ij

35

10

EXAMINER

Sheen

Jo. PECENTER 1800/2900 Serial No. Docket No. Form PTO-1449 Modified 09/935,100 UPN-4099/G-1154 List of Patent and Publication Applicant JUL 0 5 2002 Cited by Applicant David B. Weiner, et al. (Use several sheets if necessary PADEMARY U.S. Department of Commerce Filing Date Group Not Yet Assigned Patent and Trademark Office August 22, 2001 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) 32 Rose, et al., "Frequent identification of HIV-1 Dna in bronchoalveolar lavage cells obtained from individuals with the acquired immunodeficiency syndrome, Am. Rev. Respir. Dis., 1986, 143, 850-854 Roulston, et al., "Induction of monocytic differentation and NF-kB-like activities by 33 human immunodeficiency virus 1 infection of myelomonblastic cells," J. Exp. Med. **1992,** 175, 751-763 34 Salahuddin, et al., Blood, 1986, 68, 281 Schuitemaker, et al., "Biological phenotype of human immunodeficiency virus type 1 35 clones at different stages of infection: Progression of disease is associated with a shift from monocytotropic to T-cell-tropic virus populations," J. Virol. 1992, 66, 1354-1360 36 Shibata, et al., J. Med. Primatol., 1990, 19, 217-225 37 Shibata, et al., "Mutational analysis of the human immunodeficiency virus type 2 (HIV-2) genome in relation to HIV-1 and simian immunodeficiency virus SIV agm," J. Virol. 1990, 64, 742-747 38 Siegel, et al., Dev. Brain Res., 1988, 44,269-280 Starcich, et al., "Characterization of long terminal repeat sequences of HTLV-III," 39 Science, 1985, 227, 538-540 40 Stratton, et al., Carcinogenesis, 1989, 10, 899-905 41 Valentin, et al., J. Aids, 1991, 4, 751

DATE CONSIDERED

				Sheet 5 of 7	
	List of Patent and Publications 5 200 Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office		Docket No. UPN-4099/G-1154	Serial No. 09/935,100	
			Applicant David B. Weiner, et	Sheet 5 of 7 Serial No. 09/935,100 ECH CENTER 160029 Not Yet Assigned	
			Filing Date August 22, 2001	Group Not Yet Assigned	
	отн	ER DOCUMENTS (Including Author	r, Title, Date, Pertine	nt Pages, Etc.)	
	42 Weiner, et al., Pathobiology, 1991, 59, 361-371				
	43	Weiner, et al., Oncogene, 1989, 4, 11	75-1183		
	44	Westervelt, et al., "Dual regulation of silent and productive infection in monocytes by distinct human immunodeficiency virus type 1 determinants," <i>J. Virol.</i> 1992 , 66, 3925-3931			
* Wide, Radioimmune Assay Method, Kirkham, Ed., E. & S. Livingstone, 1970, pp 199-206		Livingstone, Edinburgh,			
	46	Wong-Staal, et al., Aids Res. Hum. Retroviruses, 1987, 3, 33-39			
 Work, T.S. et al., Laboratory Techniques and Biochemistry in Molecular 1978, North Holland Publishing Company, N.Y. 		in Molecular Biology,			
Yu, et al., "Open reading frame vpr of simian immunodeficiency vi virion-associated protein," J. Virol. 1990, 64, 5688-5693			iency virus encodes a		
	49 Yuan, et al., Aids Res. Hum. Retroviruses, 1990, 6, 1265-1271			71	
Zack, et al., "HIV-1 production from infected peripheral blood T cells after induced mitogenic stimulation," Science, 1988, 240, 1026-1029					
	Janel, et al., "Localization of the vpr gene product in SIVMAC infected cells." Conference on AIDS, 1989, 5, 523, Abstract T.C.O. 45.			AC infected cells,"Int'l	
EXAMINER			DATE CONSIDER	ED	

^{*} A copy of these references will not be forwarded to the U.S. Patent and Trademark Office since they are believed to be too voluminous and easily obtainable by the Examiner.

à

4

8

TECHCENTER 1800200 Serial No. Docket No. Form PTO-1449 Modified 09/935,100 NPN-4099/G-1154 pplicant List of Patent and Publications JUL 0 5 20 RADEMA" David B. Weiner, et al. Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Filing Date Group August 22, 2001 Patent and Trademark Office Not Yet Assigne OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) 52 Refaili, et al., "recombinant HIV-1 vpr protein induces cellular differentation in vitro," J of Cellular Biochemistry, Supplement 18B, 140 Abstract J 262 53 Miller, Bio Essays, 1989, 11, 91-95 54 Luckow, et al., Bio Technol, 1988, 6, 47-55 55 Harlow, et al., Cold Spring Harbor Laboratory, N.Y. 1988, 73 and 124 56 European Patent Office Supplementary European Search Report, dated November 5, 1997, 6 pages 57 Hattori, N. et al., "The vpr Gene of HIV-2 is a Transactivator Necessary for viral Expression in Primary Macrophages", Aids Res. Human Retroviruses, 1991, 7(2), 177, No. XP 002031072 (Abstract only) 58 Levy, D.N. et al., "HIV Regulatory Gene Function Analysis in a Rhabdomyosarcoma Cell Line", Vaccines. Modern Approaches to New Vaccines Including Prevention of Aids, Tenth Annual Meeting, Cold Spring Harbor, New York, September, 1992, 243-249, No. XP 000673175 **EXAMINER** DATE CONSIDERED

À

.

Sheet 6 of 7

Docket No. Serial No. Form PTO-1449 Modified List of Patent and Publication 09/935,10RECEIVED UPN-4099/G-1154 Applicant David B. Weiner, et al. JUL 1 1 2002 (Use several sheets if necessary) Group TECH CENTER 1600/290 U.S. Department of Commerce Filing Date Patent and Trademark Office Not Yet Assigned August 22, 2001 **U. S. PATENT DOCUMENTS Document Examiner** Class Subclass Initial No. Date Name 435 5 59 4,808,536 02/28/89 Chang, et al., 27 536 60 5,001,230 03/19/91 Braun, et al. FOREIGN PATENT DOCUMENTS **Translation Examiner** Initial YES NO Document No. Date **Country** 12/27/90 **PCT** WO 90/15875 61 **DATE CONSIDERED EXAMINER**

Sheet 7 of 7